

A Day In The Life: *jewellery designer*

I predict the next gold rush will be in landfill sites!

Dr Sandra Wilson explores using materials destined for landfill in the design of jewellery and ornaments.



Sum up your job in 3 words:

- 1 creative
- 2 varied
- 3 inspiring

BEGAN my working life in youth work and health promotion, though I've always been creative in my spare time.

In my late twenties, I bought a fabulous pair of purple resin earrings at London's Covent Garden, which I still have, though they look pretty ugly to me now.

Anyway, as I studied them on the way home, I realised that I could have made them myself – and more than that, I wanted to make jewellery!

I enrolled in evening classes and summer schools, and ten years later decided to study jewellery

and metal design at degree level full-time. I studied at Duncan of Jordanstone College of Art & Design in Dundee, where I now teach.

I may be biased, but Dundee is a fantastic place to live and work. I was born and brought up here, and it has been amazing to see the city transform itself in recent years.

I don't really have a typical nine-to-five day. I do most of my teaching on Mondays and Tuesdays, so after breakfast I have around one hour to prepare for the class of about 24 third-year jewellery and metal design students.

My classes involve teaching students how to work with different kinds of wax that they can then make copies of in metal.

So it's very hands on and exciting to see what students create – there is always something different.

The rest of the week I am either supporting my six PhD students or working on my own research projects.

These include exploring wearable technologies – how jewellery can connect to the internet – alongside new 3D scanning and printing techniques and recovering precious metals from electronic waste.

So I can either be

working in my own jewellery workshop at home, working in the lab in Edinburgh – I've been working as an artist-in-residence with the Love chemistry group at Edinburgh University – or catching up with meetings.

The lab in Edinburgh has developed a new chemical compound that specifically targets gold.

This is an exciting way forward, with the scarcity of gold being as it is, as we can instead use materials destined for landfill in the design of jewellery and ornaments.

I spent a lot of time at the lab mixing computer circuit boards with different acids, first removing all the metals in the boards and then adding other chemicals specifically to recover particular metals such as copper and gold.

It is much more complicated than I thought it would be.

I've also been really interested in what some of the different metal solutions can do to silver – and I've been able to create new effects which have not been seen before, as you'll see by the image here.

Basically, I've loved being an alchemist!

I've been buying computer circuit board fingers from eBay.

Generally, the base metals they contain, such as copper, iron, etc., cover the costs, and the money you make from the gold is profit.

Since I've started this

research project, I've also had lots of friends and colleagues donate their old tablets and mobile phones to me.

You need around 41 mobile phones to source one gram of gold.

Interestingly, from around one tonne of ore from the ground you can get about 30g of gold, but from one ton of electronic waste you can get around 300g of gold.

So I predict the next gold rush will be in landfill sites!

However, recovering precious metals from electronic waste is a difficult process, and best carried out in partnership with professional chemists.

I love making things, sharing my knowledge through teaching and broadening our understanding of jewellery and metal design through research, so being able to combine all three is just the best thing ever.

I'm also really fortunate that my job enables me to travel quite a bit.

This year I was teaching at the Penland School of Crafts in North Carolina, USA, and next year I'll be in India exploring traditional jewellery-making techniques and how these can be combined with new technologies such as micro-electronics. ■

A gold chloride bowl.



What advice would you give your twenty-year-old self?

Follow your passions!